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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/509,033

09/27/2004

Kenji Ogawa

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513 7590 07/05/2007  
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EXAMINER

HOLTON, STEVEN E

ART UNIT

PAPER NUMBER

2629

MAIL DATE

DELIVERY MODE

07/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/509,033	OGAWA ET AL.	
	Examiner	Art Unit	
	Steven E. Holton	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 September 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. Figure 8 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

2. Claim 3 is objected to because of the following informalities: in the second line of claim 3, the phrase "in the second sustaining period, duration in which the transition..." appears that it should be "in the second sustaining period, [the] duration in which the transition...". This is because of the comma after sustaining period seeming to indicate that the duration is a separate concept from the second sustaining period. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Hashimoto et al. (USPN: 6369781), hereinafter Hashimoto.

Regarding claim 1, Hashimoto discloses a plasma display device with scan, sustain and data electrodes. Hashimoto further discloses a method of operation including "dividing one field period into a plurality of sub-fields, each comprising an initializing period, a writing period and a sustaining period (Fig. 19, elements reset period, addressing period and sustain discharge period; the Examiner notes that the reset period corresponds to the initializing period and there are two subfields shown in the timing diagram of Fig. 19); providing a first sustaining period and a second sustaining period in a sustaining period of at least one sub-field (Fig. 21A-C), in the first sustaining period, a transition period of a sustain pulse applied to the scan electrode not being temporally overlapped with a transition period of a sustain pulse applied to the sustain electrode (Fig. 21A-C; time period 'sustain discharge period'; col. 26, lines 7-29), and in a second sustaining period, a transition period of the sustain pulse applied to the scan electrode being temporally overlapped with a transition period of the sustain pulse applied to the sustain electrode (Fig. 21A-C; time period 'group of second

assistant pulses'; col. 26, lines 7-29; the Examiner notes there is no time break between pulses in this period therefore, the transition periods of the pulses are overlapping temporally); and disposing the second sustaining period at least at an end of the sustaining period (Fig. 21A-C, the 'group of second assistant pulses' comes after the sustain discharge period; Figs. 19 and 23 show the entire subfield period is ended by the 'group of second assistant pulses')."

Regarding claim 2, Hashimoto discloses using a first and second sustaining period in a subfield that is before an initialization period for a second subfield (Fig. 23 shows a subfield ends using a 'sustain discharge period' followed by a 'group of second assistant pulses' and then the next subfield begins with a 'reset period' which corresponds to an initialization period).

Regarding claim 3, Hashimoto discloses, the second sustaining period where the transition periods are overlapped is used to substantially cause no self-erase discharge (col. 26, lines 7-29).

#### ***Allowable Subject Matter***

4. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The present invention is directed to a method for driving a plasma display panel to remove self-erase discharge during a portion of the sustain discharge period.

Dependent claim 4 identifies the uniquely distinct features "duration of the second sustaining period is changed according to a percentage of lit discharge cells". The closest prior art, Hashimoto and Nagai (USPN: 6011355) disclose overlapping temporal transitions of pulses but do not discuss different duration periods based on percentages of lit and unlit discharge cells, either singularly or in combination, fail to anticipate or render the above underlined limitations obvious.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven E. Holton whose telephone number is (571) 272-7903. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Steven E. Holton  
Division 2629  
June 23, 2007

AMR A. AWAD  
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to read "Amir A. Awad", is written over the printed name and title.